

FINAL ENVIRONMENTAL ASSESSMENT

PROPONENT: JTL Group, Inc. **SITE NAME:** Mohl Site
LOCATION: 32.5 acres in the E½NE¼ Section 21, and the W½ Section 22, T29N, R21W **COUNTY:** Flathead

TYPE AND PURPOSE OF ACTION:

The applicant proposes to amend its existing gravel mining permit on the Mohl site to add an additional 32.5 acres to the site located 5 miles north of Evergreen at an approximate elevation of 2935 feet, MSL, making it a 180.5-acre site. It is located between Highway 2 and Helena Flats Road and is a long-term mining, asphalt, concrete and aggregate business formerly operated by A-1 Paving. An additional volume of 900,000 cubic yards would be extracted from the new area. Material mined from the new area would be excavated and transported to existing processing facilities within the existing permit. This area is being included in the permit primarily to supply more gravel resources but a crusher and stockpiles could also be temporarily located in the proposed amendment area. Parts of the new area are used as hayfield and some were mined in the past but mining stopped when ground water was encountered. There is an old stock car raceway and an abandoned wood chip plant located within the proposed site, which would be removed. A natural gas pipeline dissects the amendment area (as it does the existing permitted mine area) and mining will avoid it here as well. The applicant would reclaim the site to ponds and grassland. The grassland areas would be smoothed, graded with slopes to no steeper than 3:1, and re-soiled before being re-seeded. The pond portion of the site would be dug approximately 30 feet deep with an excavator, dredge or dragline and would be reclaimed according to DEQ pond guidelines for a fishery. No other changes are proposed to the permit since the last approved Amendment "B" in November 2001. An EA was written for that amendment and made available for public review. Zoning approval for the proposed amendment was granted by Flathead County on January 28, 2005. Final reclamation would be done by December 2017.

This environmental assessment (EA) is required under the **Montana Environmental Policy Act (MEPA)**. An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit on which the state must make a decision, so that an informed decision can be made. MEPA sets no environmental standards, even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required mitigation measures or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow DEQ or any other state agency to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its approved rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut materials mining. This law requires that a reclamation bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use, if the permittee fails to reclaim the site as required by the law, the rules, and the permit.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to its proposed actions.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE AND EXAMPLE/GUIDANCE QUESTIONS	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>The proposed mine is located in fairly flat terrain formed by an old river terrace above the Flathead River. The deposit consists of water-worked glacial debris overlying deeper valley bedrock. A large portion of the site has been mined in the past and topsoil was lost during that time. The remaining portion of the area is currently used as a hay field. Soil, which is 12 inches thick in the general area would be salvaged and used for reclamation.</p> <p>Soils would be salvaged and stockpiled away from the pit, roads and facility areas. Following mining, grading and ripping, the soils would be replaced, disked and seeded to grass around the ponds. There are no fragile, compactible or unstable soils present, no unusual geologic features and no special reclamation considerations.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or ground water resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>The general area overlies a fast-moving and high quality aquifer. A relatively high (within 12 feet of the surface) water table exists in the area of the proposed gravel pit amendment. The water table is recharged mainly by the Flathead River.</p> <p>Spring Creek is located 1 mile east and Trumble Creek is located ¼ mile to the west of the site across Highway 2 but mining would not impact these creeks. No surface water would enter or leave the site and no de-watering would occur.</p> <p>The amended tract would be mined in a similar manner as the existing permitted mine areas. Gravel would be mined above the water table with dozers, loaders and scrapers, and mined below the water table with an excavator, dredge or dragline. The water table fluctuates an average of two feet from high to low water and the water is ten to twelve feet below the surface of the ground. After mining, total depth in the pond would average 15 to 20 feet of water with variations in places. There would be no discharge from the pit area.</p> <p>There are 118 water wells recorded in the GWIC Water Well Database in Section 22. The wells were drilled an average of 51 feet deep, have static water levels averaging 11 feet and yield an average of 61 gallons per minute. The mine intercepts potable water but has not affected these wells in the past. There is no history of complaints about water quality or quantity.</p> <p>Special precautions would be taken to minimize possible contamination of the ground water. No bulk fuel would be stored within this amendment area. Fuel is stored elsewhere in a concrete containment structure near the office complex within the existing permit area. Five dedicated monitoring wells are used to observe and record any changes in water level and water quality at the site. The monitoring program, implemented in early 2002, indicates that water levels respond to seasonal variations and are not significantly affected by mining activities. Water quality samples from the site that are submitted to a lab for volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) analyses (both are EPA methods with concentrations measured in parts per billion (ppb)) have not shown concentrations above detection levels in wells down gradient of the asphalt plant from the beginning</p>

of the monitoring program through 2005. This suggests that an asphalt plant can be operated in this hydrologic setting without impacting water quality. The Department also requires testing for temperature, pH, specific conductivity, dissolved oxygen and total organic carbon twice each year from these observation wells. Portable equipment with fuel tanks such as loaders and trucks would be in various places within the facility. Any accidental spills or leaks from equipment would be excavated and disposed of. No waste or trash would be disposed of at the site. With these precautions, the quality and quantity of the ground water should not be adversely impacted.

Sampling results for October 2006

Water analysis done on October 26, 2006 detected, for the first time since monitoring started in 2002, a minor amount of automotive fuel in several of the monitoring wells located downgradient from the fueling storage area near the office complex. According to the 2006 Annual Groundwater Monitoring Report prepared by Applied Water Consulting (2006) the samples were submitted for laboratory analysis of VPH and EPH. The results of the laboratory analyses identified low-level concentrations of benzene, toluene, and xylenes in the samples collected from monitoring wells MW-2 and MW-3, and low-level concentrations of toluene and xylenes in the sample from MW-4. All concentrations were below the respective Risk Based Screening Levels (RBSL's) and ground water standards. Monitoring well MW-2, which is closest to the asphalt batch plant and downgradient of the stormwater detention pond, had the highest concentration of benzene at 1.2 µg/L (ppb). The maximum level of benzene allowed for drinking water is 5.0 µg/L (Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases, 2003). Benzene concentrations decrease downgradient and were detected at 0.50 µg/L in the sample from monitoring well MW-3, but were not detected in samples from monitoring wells MW-4, MW-5, and MW-6. The source of the contamination is likely from gasoline because VPH constituents were identified in the laboratory results and no EPH analytes were present. The source of the contamination is not readily apparent. Although monitoring well MW-1 is used as the up-gradient sentry well to detect the potential for offsite contaminant migration, it is not directly up gradient of MW-2 or MW-3 because of the southeast component of the ground water flow direction.

The laboratory data show that contaminant concentrations progressively decrease downgradient and were absent in the samples from monitoring wells MW-5 and MW-6 at the southern boundary of the facility. Ground water dispersion and dilution is attributed for the decreasing trend. JTL is unable to identify the source of these compounds, but they are double-checking their motor fuel storage facilities and fueling procedures at this time. Offsite contamination cannot be ruled out since this site is located adjacent to a major highway and there is a refueling station (Eagle Fuel) across the highway.

Sampling results for April 2007

This sampling event was requested by the DEQ to confirm the results presented in the 2006 Annual Groundwater Monitoring Report conducted in October of 2006. Groundwater Samples were collected from all six monitoring wells on April 27, 2007. The samples were submitted for laboratory analysis of VPH and EPH-screening analyses.

A water table map prepared from static water level measurements made on April 27, 2007 indicates the flow direction is to the south-southeast and the hydraulic gradient is 0.002.

The results from the previous sampling conducted in October of 2006 identified low-level concentrations of benzene, toluene, and xylenes in the samples collected from monitoring wells MW-2 and MW-3; and low-level concentrations of toluene and xylenes in the sample from MW-4. All concentrations were below the respective RBSL's and ground water standards. Monitoring well MW-2, which is closest to the asphalt batch plant and downgradient of the stormwater detention pond had the highest concentration of benzene at 1.2 µg/L. Benzene concentrations decrease downgradient and were detected at 0.50 µg/L in the sample from monitoring well MW-3, but was not detected in samples from monitoring wells MW-4, MW-5, and MW-6.

The results from this sampling event identified low-level concentrations of benzene, toluene and xylenes in the samples collected from monitoring wells MW-3, MW-5, and a low-level concentration of toluene in MW-6. Once again, all concentrations are below the respective RBSL's and maximum contaminant levels (MCL's). Monitoring well MW-2 and MW-3 previously showed the highest concentrations of VPH constituents. This sampling event identified no detection of VPH constituents in MW-2 and MW-4; and a slight increase in MW-3. Based on changes in concentrations of BTX from the previous sampling event for monitoring wells MW-2 and MW-5, the ground water flow direction, and the distance between the two wells, it appears that a VPH concentration is moving through the site at a rate of approximately 17 ft/day.

JTL has instituted a fuel-specific awareness training program to educate employees about safe handling of all fuels kept on site, from simple lawn mower gas to major truck refueling. Emphasis is on just how little automotive gasoline it takes to show up in these monitoring wells. Topping off privately-owned passenger autos at the gas station on a hot day can cause enough fuel to spill from a car to show up in analysis. Rainwater runoff from the employee parking areas drains into the retention pond directly up-gradient from MW-2. MW-2 was free of all fuel compounds in this testing event.

Cumulative Impacts

Approximately 99 acres of post-mining pond area are currently approved at this site. An additional 18 acres of post-mining pond area have been requested under this pending amendment application. Potential cumulative impacts from post-mine ponds (approximately 117 acres) are discussed below.

Water levels: Given the high yield of the shallow Kalispell aquifer, water level or flow rate is not likely to be significantly affected by the post-mine ponds. Increasing pond surface area will increase evaporation but should not measurably affect aquifer water levels. Domestic well supply in the vicinity of the ponds should not be diminished.

Springs: Unless removed during mining, springbrooks which result from the natural upwelling of ground water should not be disrupted by the presence of the ponds, as seasonal aquifer water levels will not be significantly changed.

Flow patterns: Depending upon the gradient of the water table, a large pond would be more likely to influence local flow patterns than small ponds. Expansion of pond areas may need to take into account potential influences on local flow patterns. However, the pit ponds will not significantly influence general flow direction.

	<p><u>Heating:</u> Increased pond surface area may affect ground water temperature due to heating in the pond from exposure to sun and ambient air temperatures. High transmissivity of the Kalispell aquifer, moderate ambient air temperatures in the Kalispell Valley, depth of the ponds and mixing with down-gradient ground water make significant heating of the aquifer or river unlikely. Studies indicate that pit ponds have minimal impacts on ground water temperatures and that these minor effects are dissipated within tens to hundreds of meters of the pit (Ostrander et al, 1998). Monitoring for potential thermal changes downgradient of the pit ponds as they develop could help in estimating cumulative impacts in the Kalispell aquifer and Flathead River.</p> <p><u>Aquatic life:</u> Removal of gravel also removes fauna interstitial to floodplain gravels. Study shows that distribution and abundance of these interstitial animals is determined by habitat variables within the aquifer (Ward et al, 1994). Studies regarding changes in faunal distribution patterns, abundance and changes in habitat caused by open pit mining and potential effects to Flathead River biota have not been undertaken and therefore, the cumulative impacts are difficult to predict. Given the size of the Kalispell aquifer (approximately 40 square miles) and the wide distribution of interstitial fauna within the aquifer, removal of 117 acres of the aquifer would be expected to affect only a small portion of the population. More data would need to be gathered to more precisely address this impact.</p> <p><u>Water quality:</u> The greatest potential for contamination during mining is associated with the use of petroleum products for fuels and lubricants. Measures are taken at each mine site to prevent likely introduction of petroleum products to ground water (See discussion above in this section). Upon completion of mining, land surrounding post-mining ponds would be re-soiled and seeded to stabilize areas adjacent to the pond and decrease the likelihood of soil-borne surface contaminants (e.g. nutrients) washing into the pond. Post-mining ponds are anticipated to be in low-intensity agricultural and residential settings and add recreational opportunities to local residents. Although the presence of natural or constructed ponds may increase the vulnerability of shallow ground water to surface contamination, the setting of these ponds should decrease the likelihood of significant surface contamination from land uses.</p>
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	Air quality should not be degraded as a result of adding this area to the permit. The added resource would, however, extend the number of years the existing dust situation would be present. Dozers, loaders, and trucking equipment do cause some dusty conditions in disturbed soil sites, but the operator must comply with existing dust emission standards. Dust would be controlled around the site by water truck and dust suppressants. The site is not within a Class I airshed.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?	There are no known rare or sensitive plants in the site area. Vegetation consists of pasture grasses, and covers 80% of the ground except in the north portion where previous mining had removed all soil. Existing vegetation would be removed and re-planted with grass species compatible with the proposed reclaimed use. There are no rare plants or cover types present.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	Although the area has been used for mining and wood chip production in the past, it is now used primarily for grass production; it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known. These animals would be displaced on a small scale as mining progresses, but some will re-inhabit the area as reclamation follows behind mining. Permanent

	impacts on wildlife are considered to be minimal. Fish and waterfowl will replace some of the existing dry land species as habitat changes from dry land grass to a lake.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	Although there are cultural values in the general area, much of this site has been previously disturbed by modern man by mining, commercial wood chip processing and farming, thus destroying the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State Historic Preservation Office would be promptly notified.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	<p>The site is located in a scenic, but not unique area. There would be a temporary deterioration of aesthetics while the operation was under way. However, reclamation would return the area to a visually acceptable landscape. The site is visible by homes, businesses and roads in the local area. Hours of operation for the site would generally be 7:00 am to 7:00 pm, Monday through Saturday.</p> <p>Noise levels generated by a crusher, concrete plant, dozers, loaders and truck traffic at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure to employees on site without hearing protection could lead to hearing loss.</p>
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	There are no unusual demands on land, water, air or energy anticipated as a result of this amendment.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	There are no other known impacts on environmental resources anticipated as a result of this amendment.
IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	<p>Heavy equipment and facilities including crushers, trucks and loaders will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents.</p> <p>Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping, but ongoing operations are not planned for nighttime. This proposed operation should not significantly affect human health.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	Some of the acreage listed in the Type and Purpose of Action would be taken out of agricultural use and put into industrial/commercial use. Upon completion of mining, the land would be reclaimed to a pond and grassland.

13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	Additional taxes may be generated for the county and state in the form of income taxes paid by the applicant and fuel and highway taxes paid by hauling equipment.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	The operation would require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	City/County zoning clearance has been obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	No wilderness or recreational areas are nearby or accessed through this tract.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	The project would not add to the population or require additional housing.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	The area has generally been utilized for commercial and industrial development in the past. This proposal would add more land to this existing aggregate business. The area is underlain by a high quality deposit of sand and gravel and it is not unexpected that development of the resource would be proposed.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	This area has gradually shifted from agricultural to commercial and industrial.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	None known.

Alternatives Considered:

<p>A. Denial: The pit would not be permitted and the owner of the gravel resource would be denied full utilization of his property at this time. However, another application could be submitted to revise the existing plan, or an application could be submitted for another site.</p> <p>B. Approval of the application with mitigating conditions: The Plan of Operation has been written with mitigating conditions including hours of operation, water protection, soil salvage and full reclamation.</p>

References cited:

<p>Applied Water Consulting LLC. 2006. 2006 Annual Groundwater Monitoring Report for JTL LaSalle [Mohl] Pit.</p> <p>Applied Water Consulting LLC. 2007. April 2007 Groundwater Detection Monitoring Report for JTL LaSalle [Mohl] Pit.</p> <p>Montana DEQ. Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. 2003.</p> <p>Noble, R.A. and J.A. Stanford. 1986. Ground-water Resources and Water Quality of Unconfined Aquifers in the Kalispell Valley, Montana. Montana Bureau of Mines and Geology, Open File Report 177.</p> <p>Ostrander, M.D., P.J. Martin, B. Blackport and M. Picotti. 1998. Impact of Aggregate Extraction Activities on Cold Water Discharge. Groundwater in a Watershed Context. Canadian Water Resources Association.</p> <p>Stanford, J.A., J.V. Ward and B.K. Ellis. 1994. Ecology of the Alluvial Aquifers of the Flathead River, Montana. In:</p>

Gilbert J., Danielopol, D.L. & Stanford, J.A. (Eds.): Groundwater Ecology: 367-390. Academic Press, Inc., San Diego, California.

Ward, J.V., J.A. Stanford and N.J. Voelz. 1994. Spatial Distribution Patterns of Crustacea in the Floodplain Aquifer of an Alluvial River. Hydrobiologia, 287: 11-17.

Public Involvement, Agencies, Groups, or Individuals contacted:

Flathead County Planning for zoning. This Environmental Assessment was made available to the public for review by notice in the Daily Inter Lake Newspaper and comments were accepted through Friday, July 20, 2007. No comments were received.

Other Governmental Agencies with Jurisdiction, List of Permits Needed:

Mine Safety and Health Administration for safety permit; DEQ for Air Quality Permit.

Magnitude and Significance of Potential Impacts:

Impacts are unlikely to be significant on the general environment because of the scope and location of the project, the lack of significant or threatened wildlife or habitat, and because of the mitigation measures placed in the Plan of Operation.

Regulatory Impact on Private Property:

The analysis conducted in response to the Private Property Assessment Act (PPAA) indicates no impact is expected on the use of private property. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐ EIS

☐ MORE DETAILED EA

☒ NO FURTHER ANALYSIS

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA: None

Written By: Rod Samdahl, Reclamation Specialist Date: July, 2007
(Signature)

Approved By: _____ Date: _____
(Signature)

AMENDMENT "C" PERMIT MAP



FINAL POND CONTOUR MAP

